AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Original) A wireless network device for communicating with a network comprising:

a memory to store an image comprising a plurality of virtual machines and only one multi-tasking operating system, wherein each of the virtual machines comprises a wireless network application to execute on the multi-tasking operating system;

a processor to execute the virtual machines; and

a port comprising

a physical-layer device to communicate with the network, and

a media access controller to communicate with the physical-layer device and the processor.

2. (Original) A wireless network device according to claim 1 which is compliant with a standard selected from the group consisting of IEEE standards 802.11, 802.11a, 802.11b, 802.11g and 802.11n.

3. (Original) The wireless network device of claim 1, wherein the memory comprises a non-volatile memory, further comprising:

a volatile memory; and

a memory controller to create a copy of the image from the non-volatile memory to the volatile memory;

wherein the processor executes the virtual machines from the volatile memory.

4. (Original) The wireless network device of claim 1:

wherein the memory comprises a virtual machine queue for each virtual machine and a processor queue for the processor;

wherein the processor stores data to be processed for the virtual machine being executed by the processor in the processor queue;

wherein each virtual machine creates a copy in the respective virtual machine queue of the data in the processor queue when the processor is executing the respective virtual machine; and

wherein when the processor resumes executing one of the virtual machines after executing another of the virtual machines, the one of the virtual machines copies the data from the respective virtual machine queue to the processor queue.

5. (Currently Amended) The wireless network device of claim 1, wherein at least one of the wireless network applications [[are]] is selected from the group consisting of:

a wireless network access point;

a wireless network client;

a wireless network point-to-point bridge;

a wireless network multi-point bridge; and

a wireless network repeater.

6. (Original) The wireless network device of claim 1, wherein the image further comprises:

a plurality of virtual machine device drivers to communicate with the virtual machines; and

a media access controller device driver to communicate with the virtual machine device drivers and the media access controller.

7. (Original) The wireless network device of claim 1, further comprising:

an input device to select one or more of the virtual machines;

wherein the processor executes the virtual machines selected by the input devise.

8. (Original) The wireless network device of claim 1, wherein the processor executes a plurality of the virtual machines concurrently.

9. (Original) The wireless network device of claim 1:

wherein the virtual machines comprise a wireless network access point virtual machine and a wireless network client virtual machine;

wherein the processor executes the wireless network access point virtual machine and the wireless network client virtual machine concurrently;

wherein the wireless network client virtual machine comprises

a first virtual wireless port to communicate with the port, and

a first virtual bride to communicate with the first virtual wireless port; and

wherein the wireless network access point virtual machine comprises

a second virtual wireless port to communicate with the port,

a virtual distribution service port to communicate with the first virtual bridge, and

a second virtual bridge to communicate with the second virtual wireless port and the virtual distribution service port.

10. (Original) A method for a wireless network device for communicating with a network comprising;

storing an image comprising a plurality of virtual machines and only one multi-tasking operating system, wherein each of the virtual machines comprises a wireless network application to execute on the multi-tasking operating system; and

executing the virtual machines.

11. (Original) The method of claim 10, wherein the wireless network device is compliant with a standard selected from the group consisting of IEEE standards 802.11, 802.11a, 802.11b, 802.11g and 802.11n.

12. (Original) The method of claim 10, wherein the image is stored in a non-volatile memory, further comprising:

copying the image from the non-volatile memory to a volatile memory; and

wherein the virtual machines are executed from the volatile memory.

13. (Original) The method of claim 10, further comprising:

creating in the volatile memory a virtual machine queue for each virtual machine and a processor queue for a processor;

storing in the processor queue data to be processed for the virtual machine being executed;

creating a copy in the respective virtual machine queue of the data in the processor queue when the respective virtual machine is executing; and

wherein when one of the virtual machines resumes executing after another of the virtual machines was executing, copying the data from the respective virtual machine queue to the processor queue.

14. (Currently Amended) The method of claim 10, wherein at least one of the wireless network applications [[are]] is selected from the group consisting of:

a wireless network access point;

a wireless network client;

a wireless network point-to-point bridge;

a wireless network multi-point bridge; and

a wireless network repeater.

15. (Original) The method of claim 10, further comprising:

executing selected ones of the virtual machines in accordance with an input.

16. (Original) The method of claim 10, further comprising:

executing a plurality of the virtual machines concurrently.

17. (Original) A wireless network device for communicating with a network comprising:

a memory to store an image comprising a plurality of virtual machines and only one multi-tasking operating system, wherein each of the virtual machines comprises a wireless network application to execute on the multi-tasking operating system;

a processor to execute the virtual machines; and

a bus to communicate with the processor and the network.

18. (Original) A wireless network device according to claim 17 which is compliant with a standard selected from the group consisting of IEEE standards 802.11, 802.11a, 802.11b, 802.11g and 802.11n.

19. (Original) The wireless network device of claim 17, wherein the memory comprises a non-volatile memory, further comprising:

a volatile memory; and

a memory controller to create a copy of the image from the non-volatile memory to the volatile memory;

wherein the processor executes the virtual machines from the volatile memory.

20. (Original) The wireless network device of claim 17:

wherein the memory comprises a virtual machine queue for each virtual machine and a processor queue for the processor;

wherein the processor stores data to be processed for the virtual machine being executed by the processor in the processor queue;

wherein each virtual machine creates a copy in the respective virtual machine queue of the data in the processor queue when the processor is executing the respective virtual machine; and

wherein when the processor resumes executing one of the virtual machines after executing another of the virtual machines, the one of the virtual machines copies the data from the respective virtual machine queue to the processor queue.

21. (Original) The wireless network device of claim 17, wherein the image further comprises:

a plurality of virtual machine device drivers to communicate with the virtual machines; and

a bus interface driver to communicate with the virtual machine device drivers and the bus.

22. (Original) The wireless network device of claim 17, further comprising:

a physical-layer device to communicate with the network; and

a media access controller to communicate with the physical-layer device and the bus.

23. (Original) The wireless network device of claim 22, wherein the image further comprises:

a plurality of virtual machine device drivers to communicate with the virtual machines;

a first bus interface driver to communicate with the virtual machine device drivers and the bus;

a second bus interface driver to communicate with the bus; and

a media access controller device driver to communicate with the second bus interface driver and the media access controller.

24. (Currently Amended) The wireless network device of claim 17, wherein at least one of the wireless network applications [[are]] is selected from the group consisting of:

a wireless network access point;

a wireless network client;

a wireless network point-to-point bridge;

a wireless network multi-point bridge; and

a wireless network repeater.

25. (Original) The wireless network device of claim 17, further comprising:

an input device to select one or more of the virtual machines;

wherein the processor executes the virtual machines selected by the input device.

26. (Original) The wireless network device of claim 17, wherein the processor executes a plurality of the virtual machines concurrently.

27. (Previously Presented) The wireless network device of claim 17:

wherein the virtual machines comprise a wireless network access point virtual machine and a wireless network client virtual machine;

wherein the processor executes the wireless network access point virtual machine and the wireless network client virtual machine concurrently;

wherein the wireless network client virtual machine comprises

a first virtual wireless port to communicate with the bus, and

a first virtual bridge to communicate with the first virtual wireless port; and

wherein the wireless network access point virtual machine comprises

a second virtual wireless port to communicate with bus,

a virtual distribution service port to communicate with the first virtual bridge, and

a second virtual bridge to communicate with the second virtual wireless port and the virtual distribution service port.

28. (Previously Presented) A wireless network device for communicating with a network comprising:

memory means for storing an image comprising a plurality of virtual machines and only one multi-tasking operating system, wherein each of the virtual machines comprises a wireless network application to execute on the multi-tasking operating system;

processing means for executing the virtual machines; and

port means comprising

physical-layer means for communicating with the network, and

media access control means for communicate with the physical-layer means and the processing means.

29. (Previously Presented) A wireless network device according to claim 28 which is compliant with a standard selected from the group consisting of IEEE standards 802.11, 802.11a, 802.11b, 802.11g and 802.11n.

30. (Previously Presented) The wireless network device of claim 28, wherein the memory means comprises non-volatile memory means, further comprising:

volatile memory means; and

memory controller means for creating a copy of the image from the non-volatile memory means to the volatile memory means;

wherein the processing means executes the virtual machines from the volatile memory means.

31. (Previously Presented) The wireless network device of claim 28:

wherein the memory means comprises a virtual machine queue means for each virtual machine and a processor queue means for the processing means;

wherein the processing means stores data to be processed for the virtual machine being executed by the processing means in the processor queue means;

wherein each virtual machine creates a copy in the respective virtual machine queue means of the data in the processor queue means when the processing means is executing the respective virtual machine; and

wherein when the processing means resumes executing one of the virtual machines after executing another of the virtual machines, the one of the virtual machines copies the data from the respective virtual machine queue means to the processor queue means.

32. (Currently Amended) The wireless network device of claim 28, wherein at least one of the wireless network applications [[are]] is selected from the group consisting of:

a wireless network access point;

a wireless network client;

a wireless network point-to-point bridge;

a wireless network multi-point bridge; and

a wireless network repeater.

33. (Previously Presented) The wireless network device of claim 28, wherein the image further comprises:

a plurality of virtual machine device drivers to communicate with the virtual machines; and

a media access controller device driver to communicate with the virtual machine device drivers and the media access control means.

34. (Previously Presented) The wireless network device of claim 28, further comprising:

input means for selecting one or more of the virtual machines;

wherein the processing means executes the virtual machines selected by the input means.

35. (Previously Presented) The wireless network device of claim 28, wherein the processing means executes a plurality of the virtual machines concurrently.

36. (Previously Presented) The wireless network device of claim 28:

wherein the virtual machines comprise a wireless network access point virtual machine and a wireless network client virtual machine;

wherein the processing means executes the wireless network access point virtual machine and the wireless network client virtual machine concurrently;

wherein the wireless network client virtual machine comprises

a first virtual wireless port to communicate with the port means, and

a first virtual bridge to communicate with the first virtual wireless port; and

wherein the wireless network access point virtual machine comprises

a second virtual wireless port to communicate with the port means,

a virtual distribution service port to communicate with the first virtual bridge, and

a second virtual bridge to communicate with the second virtual wireless port and the virtual distribution service port.

37. (Currently Amended) A computer program embodying instructions recorded on a computer readable medium executable by a computer for a wireless network device for communicating with a network comprising:

storing an image comprising a plurality of virtual machines and only one multi-tasking operating system, wherein each of the virtual machines comprises a wireless network application to execute on the multi-tasking operating system; and

executing the virtual machines.

38. (Previously Presented) The computer program of claim 37, wherein the wireless network device is compliant with a standard selected from the group consisting of IEEE standards 802.11, 802.11a, 802.11b, 802.11g and 802.11n.

39. (Previously Presented) The computer program of claim 37, wherein the image is stored in a non-volatile memory, further comprising:

copying the image from the non-volatile memory to a volatile memory; and

wherein the virtual machines are executed from the volatile memory.

40. (Previously Presented) The computer program of claim 37, further comprising:

creating in the volatile memory a virtual machine queue for each virtual machine and a processor queue for a processor;

storing in the processor queue data to be processed for the virtual machine being executed;

creating a copy in the respective virtual machine queue of the data in the processor queue when the respective virtual machine is executing; and

wherein when one of the virtual machines resumes executing after another of the virtual machines was executing, copying the data from the respective virtual machine queue to the processor queue.

41. (Currently Amended) The computer program of claim 37, wherein at least one of the wireless network applications [[are]] is selected from the group consisting of:

a wireless network access point;

a wireless network client;

a wireless network point-to-point bridge;

a wireless network multi-point bridge; and

a wireless network repeater.

42. (Previously Presented) The computer program of claim 37, further comprising:

executing selected ones of the virtual machines in accordance with an input.

43. (Previously Presented) The computer program of claim 37, further comprising:

executing a plurality of the virtual machines concurrently.

44. (Previously Presented) A wireless network device for communicating with a network comprising:

memory means for storing an image comprising a plurality of virtual machines and only one-multi-tasking operating system, wherein each of the virtual

machines comprises a wireless network application to execute on the multi-tasking operating system;

processing means for executing the virtual machines; and

bus means for communicating with the processing means and the network.

45. (Previously Presented) A wireless network device according to claim 44 which is compliant with a standard selected from the group consisting of IEEE standards 802.11, 802.11a, 802.11b, 802.11g and 802.11n.

46. (Previously Presented) The wireless network device of claim 44, wherein the memory means comprises non-volatile memory means, further comprising:

volatile memory means; and

memory controller means for creating a copy of the image from the non-volatile memory means to the volatile memory means;

wherein the processing means executes the virtual machines from the volatile memory means.

47. (Previously Presented) The wireless network device of claim 44:

wherein the memory means comprises a virtual machine queue means for each virtual machine and a processor queue means for the processing means;

wherein the processing means stores data to be processed for the virtual machine being executed by the processing means in the processor queue means;

wherein each virtual machine creates a copy in the respective virtual machine queue means of the data in the processor queue means when the processing means is executing the respective virtual machine; and

wherein when the processing means resumes executing one of the virtual machines after executing another of the virtual machines, the one of the virtual machines copies the data from the respective virtual machine queue means to the processor queue means.

48. (Previously Presented) The wireless network device of claim 44, wherein the image further comprises:

a plurality of virtual machine device drivers to communicate with the virtual machines; and

a bus interface driver to communicate with the virtual machine device drivers and the bus means.

49. (Previously Presented) The wireless network device of claim 44, further comprising:

a physical-layer device means for communicating with the network; and

media access control means for communicating with the physical-layer device means and the bus means.

50. (Previously Presented) The wireless network device of claim 49, wherein the image further comprises:

a plurality of virtual machine device drivers to communicate with the virtual machines;

a first bus interface driver to communicate with the virtual machine device drivers and the bus means;

a second bus interface driver to communicate with the bus means; and

a media access controller device driver to communicate with the second bus interface driver and the media access control means.

51. (Currently Amended) The wireless network device of claim 44, wherein at least one of the wireless network applications [[are]] is selected from the group consisting of:

a wireless network access point;

a wireless network client;

a wireless network point-to-point bridge;

a wireless network multi-point bridge; and

a wireless network repeater.

52. (Previously Presented) The wireless network device of claim 44, further comprising:

input means for selecting one or more of the virtual machines;

wherein the processing means executes the virtual machines selected by the input means.

53. (Previously Presented) The wireless network device of claim 44, wherein the processing means executes a plurality of the virtual machines concurrently.

54. (Previously Presented) The wireless network device of claim 44:

wherein the virtual machines comprise a wireless network access point virtual machine and a wireless network client virtual machine;

wherein the processing means executes the wireless network access point virtual machine and the wireless network client virtual machine concurrently;

wherein the wireless network client virtual machine comprises

a first virtual wireless port to communicate with the bus means, and

a first virtual bridge to communicate with the first virtual wireless port; and

wherein the wireless network access point virtual machine comprises

a second virtual wireless port to communicate with the bus means,

a virtual distribution service port to communicate with the first virtual bridge, and

a second virtual bridge to communicate with the second virtual wireless port and the virtual distribution service port.